

## APPENDIX B: HAZARDOUS WASTE LANDFILL COVER DESIGN CONSIDERATIONS

### Table of Contents

Paragraph	Page
<b>B-1. General</b>	
a. Intended use of document .....	B-1
b. Purpose and function of cover system.....	B-1
c. Alternative cover types .....	B-1
d. RCRA hazardous waste landfill covers .....	B-1
<b>B-2. Predesign Investigations</b>	
a. General.....	B-2
b. Field surveys and record searches.....	B-2
c. Geological investigations .....	B-3
d. Geotechnical laboratory tests.....	B-4
e. Chemical data requirements.....	B-5
<b>B-3. Cover System Components</b>	
a. General.....	B-6
b. Erosion control layer.....	B-7
c. Protective soil layer.....	B-8
d. Filter layer—geotextile .....	B-9
e. Filter layer—granular materials .....	B-11
f. Drainage layer.....	B-12
g. Drainage collection and removal system .....	B-16
h. Barrier layer—geomembrane .....	B-17
i. Barrier layer—clay.....	B-18
j. Barrier layer—geosynthetic clay liner .....	B-20
k. Cover penetrations .....	B-20
l. Gas collection and removal system.....	B-20
m. Random fill and regraded waste .....	B-23
n. Clearing and grubbing.....	B-24
<b>B-4. Geotechnical Design</b>	
a. Settlement .....	B-24
b. Stability analysis .....	B-26
c. Test fills.....	B-27
d. Borrow areas .....	B-29
e. Ground water monitoring.....	B-29
f. Cover grading requirements.....	B-30
g. Leachate control.....	B-30
h. Cover surface runoff and erosion control requirements.....	B-30

<b>B-5. Civil Design</b>	
a. Site access routes .....	B-32
b. Staging areas and phasing requirements .....	B-32
c. Decontamination facility.....	B-32
d. Security fencing .....	B-33
e. Demolition .....	B-33
<b>B-6. Health and Safety</b>	
a. General.....	B-33
b. Design criteria .....	B-33
<b>B-7. Chemistry</b>	
a. General.....	B-33
b. Design criteria .....	B-34
<b>B-8. Operation and Maintenance Requirements</b>	
a. General.....	B-34
b. Ground water.....	B-34
c. Leachate .....	B-34
d. Landfill Gas.....	B-34
e. Settlement.....	B-34
f. Slope stability.....	B-34
g. Landfill cover .....	B-35
h. Runoff controls .....	B-35
i. Other features .....	B-35
j. Inspections .....	B-35
k. Maintenance .....	B-35
<b>B-9. Environmental and Regulatory Compliance</b>	.....B-35
<b>B-10. Potential List of Drawings</b>	.....B-37
<b>B-11. Potential List of Specifications</b>	.....B-37